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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/540,401

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EXAMINER

KHAN, MEHMOOD B

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/540,401 | Applicant(s) NISHIO ET AL. | |
| | Examiner MEHMOOD B. KHAN | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2010 has been entered.

Response to Arguments

Applicant's arguments filed 12/20/2010 have been fully considered but they are not persuasive.

Applicant argues against the Obviousness Type Double Patenting rejection, specifically that the amended limitations to the claims are not found in the conflicting claims and are not supplemented by Hashem et al..

The Examiner respectfully disagrees. Please see the Double Patenting rejection below, where passages in Hashem clearly supplements the conflicting claims.

Applicant argues Hashem does not disclose Applicant's claimed manner for selecting the groups of subcarriers. Applicant further argues that neither Li nor Hashem disclose Applicant's claimed subject matter of generating a CQI representing the average reception quality within a number of subcarrier blocks indicated by received information.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., reception quality *within a number of subcarrier blocks indicated by received information*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this instance, the combination of Li and Hashem discloses averaging the SINR of the groups that are selected. Please see discussion below. Li clearly discloses selection of clusters, selecting of blocks. Li also discloses averaging of SINRs. Hashem discloses based on the average of selected subcarriers blocks.

Thus all claimed limitations have been met.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 37 and 38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 12/341306 in view of Hashem et al. (US 20040125743).

Conflicting claims 1-3, and instant claims 37 and 38 are drawn to generating one channel quality indicator for subcarriers. These claims differ in scope in that the instant claims 36 and 37 are narrower than conflicting claims 1-3.

Conflicting claims 1-3 disclose instant claims 37 and 38 as follows:

Conflicting claim 1. A radio communication apparatus comprising: a channel quality indicator generating section that generates one channel quality indicator representing reception quality of a plurality of subcarriers; and a reporting section that reports the generated one channel quality indicator.

Conflicting claim 2. The radio communication apparatus according to claim 1, wherein the channel quality indicator generating section generates the one channel quality indicator representing the reception quality of a plurality of selected subcarriers.

Conflicting claim 3. The radio communication apparatus according to claim 2, wherein the reporting section reports the generated one channel quality indicator and information about the selected subcarriers.

However, the conflicting claims do not specifically disclose orthogonal frequency divisional multiplexing (OFDM), each of the subcarrier blocks including a plurality of subcarriers, information of a number, the number corresponding to the subcarrier blocks, representing an average CQI of the selected subcarrier blocks.

In an analogous art, Hashem discloses orthogonal frequency divisional multiplexing (OFDM) (**title, 0006**), each of the subcarrier blocks including a plurality of subcarriers (**0008, groups of subcarriers, thus plurality of subcarriers**), representing an average CQI of the subcarriers (**0020, where Hashem discloses taking average of the S/Is of all the subcarriers**), information of a number, the number corresponding to the subcarrier blocks

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(0007, one number for each group). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify conflicting application 12/341306 to include using one CQI as taught by Hashem so as to determine a single link mode based on the average quality **(0012)**.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 2009/0279498 herein Li) in view of Hashem et al. (US 2004/0125743 herein Hashem).

Claim 37, Li teaches a radio communication apparatus **(Abstract)** for receiving an orthogonal frequency division multiplexing (OFDM) **(Abstract, OFDMA)** signal, the radio communication apparatus comprising:

a reception section that receives information of a number **(0080, cluster allocation, thus information of a number, since the base station transmits that information must be received, thus reception section)** from a communicating party **(0080, cluster allocation transmitted from base station)**, the number corresponding to subcarrier blocks **(0077, clusters)** to be used for averaging reception quality, **(0077, averaging SINR)**, each of the subcarrier blocks including a plurality of subcarriers **(0025, subcarriers into groups of clusters)**;

a CQI generating section that generates one CQI **(0077, average of SINR for clusters, thus CQI generating section)**, a reporting section that reports the generated CQI **(0077, feedback thus reporting section)** and information indicating positions **(0077, Cluster index)** of the selected subcarrier blocks, to the communicating party **(0077, feedback sent to the base station)**.

Li does not explicitly teach, in the same embodiment, a subcarrier block selection section that selects subcarrier blocks up to the number, the selected subcarrier blocks providing preferred reception quality.

However in an alternative embodiment Li teaches a subcarrier block **(0086, clusters)** selection section that selects subcarrier blocks up to the number **(0086, Group index, SINR for clusters in the group thus subcarrier block selection)**, the selected subcarrier blocks providing preferred reception quality **(0086, SINR higher then threshold for clusters, thus preferred reception quality)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to slightly modify the teachings of Li in order to reduce overhead on feedback **(0086)**,

the CQI being a value **(0077, SINR of each cluster)** representing an average of reception quality **(0077, average)**.

Li does not explicitly teach based on the average of only the selected subcarrier blocks.

In an analogous art, Hashem teaches based on the average of only the selected subcarrier blocks **(0008, average of the groups)**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Li to average reception quality as taught by Hashem so as to allow selection of a link mode **(0008)**.

Claim 38, as analyzed with respect to the limitations as discussed in claim 37.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B. K./
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617